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ABSTRACT

Assignment of ESEA Title III monies to State agencies mandates a research model for needs assessment to facilitate interstate comparisons and generalizations. Theoretical postulates for and empirical evidence from the Virginia Needs Assessment Project suggest a prototype design, moving in three phases from ideas into program outcomes. Phase I identifies documentary policy guidelines from authoritative and nonauthoritative sources internal and external to the State, identifies documentary program recommendations from internal authoritative sources, and secures perceptions of educational objectives from internal nonauthoritative sources. Phase II involves comparative analysis of documentation and perceptions with actual attainments in learner-oriented and learner-facilitative domains to identify gaps as operationally defined needs, and involves determination of need characteristics -- incidence, criticality, dispersion, and consociation. Phase III involves a planning design for periodic reassessment. (Author)

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# Research Model for State Educational Needs Assessment

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I will open my remarks with a brief review of the Virginia Needs Assessment Study. However, our purpose today is limited to a description of the project strategy which we submit as a suggested model for state needs assessment, to be considered independently from the influence of idiosyncratic state characteristics or legal requirements for assessment of state educational needs that were established in 1968 for administration of Title III of ESEA. Therefore, this paper does not report in detail on project population, sampling, instrumentation, data analysis, results and conclusions. The Bureau staff would be most happy to forward by mail information about these aspects of the study exclusive of results and conclusions which can only be disseminated by the Virginia State Department of Education. The address is Bureau of Educational Research, School of Education, University of Virginia.

## Overview of Virginia State Educational Needs Assessment Study

In 1969, the Virginia State Department of Education--as part of the total state plan--undertook to assess the educational needs of its public school children. On June 30, 1969, the SDE subcontracted with the Bureau of Educational Research at the University of Virginia to conduct this assessment project.

In August, 1969, the Bureau of Educational Research began collaboration with the Virginia State Department of Education on the conduct of educational needs assessment for the state. This project represents the most systematic and comprehensive research and planning effort of this nature undertaken in Virginia in recent years. Funded for $150,000 under Title III of ESEA, the

project involved the recruitment of a staff of ten full and part-time faculty as well as graduate students and the scheduling of several concurrent activities during Fiscal Year 1970. A prototype strategy, inclusive of both learner-oriented and learning-facilitative, was developed at the outset. Several types of operationally defined objectives were then compiled or are being compiled in a variety of cognitive, affective, and supportive-facilitative domains for the state's educational system. The determination of critical needs will be made on the basis of data comparing the stated objectives and current accomplishments in the full range of state programs, services, and areas of student achievement. For this purpose an especially designed testing and questionnaire program for 20,000 students and their administrators, supervisors, teachers, as well as lay groups, is being scheduled in a representative sample of 57 school divisions throughout the state. Findings will be analyzed to establish the relationship which student achievement and other evidences of programmatic outcome bear to various categories of school system inputs. In addition to a comprehensive report of its findings, the project envisions a recommended system for updating the state's educational needs assessment in the future, and the staff will assist in training sessions designed to improve the competence of state and local educators in needs assessment activities.

## Research Strategy for Virginia Needs Assessment

The research strategy for the Virginia Needs Assessment Study evolves from the mandate that foremost attention in assessment

be given to learner-oriented needs, including the cognitive, affective, and psycho-motor domains. One stage of the strategy or system moves from goals to evidences of programmatic effort, to evidences of programmatic outcomes. Another stage will be the production of a model that focuses on the learner in the school environment, and incorporates all cognitive, affective, and facilitative data in the context of the self system interacting with the social system. The purpose of this research strategy is to identify and describe the status of learner needs in terms of their incidence, criticality, and dispersion, as well as to show the relationship of these needs to self and social variables in interaction. The findings will then be used as bases for future educational innovation and change as well as for future needs assessment, to advance, to raise, or otherwise to improve continuously throughout the state the educational outcomes of and for students in the cognitive, affective, and supportive-facilitative domains. The strategy is in part programmatic in that it moves from programmatic goals to outcomes, but a systems-like approach is also applied at different levels of abstraction with the most concrete application occurring when educational aspirations are compared with educational achievement, subject of course to the usual limitations of standardized achievement tests. The application becomes less concrete when broadly stated educational policies, for example, are compared with evidences of programmatic outcome, or when affective attitudes are compared with evidences of affective behaviors. A state-wide needs

assessment study concentrating on the learner in the school environment must necessarily embrace a wide range of variables in interaction and thus involve input-output comparisons with varying degrees of accessibility to objective evaluation.

The first stage in research strategy--already identified as a model moving from goals in programmatic outcomes--was developed at the outset of the project and evolved from both the project objectives (accepted by the State Department on September 12, 1969) and documentary analysis of policy guidelines, programmatic recommendations, and programmatic directives. An explanation of this research strategy is now reported.

## Goals

There is probably no public service or function more public than public education. Its goals and aspirations are the concern of nearly every group in our society. Thus, the goals and aspirations for education emanate officially or unofficially from a profusion and diffusion of sources, some often most obtuse in aspirational statement. In the Virginia Needs Assessment Study, goals and aspirations for learner-oriented and supportive-facilitative domains evolve from one or more of four sources (See Table 1): documented internal authoritative perceptions of the importance of educational objectives, and documented external nonauthoritative recommendations.

The internal authoritative policies are those made by individuals and official bodies in Virginia having authority and responsibility for the allocation of public resources to schools

and/or the management of school programs. A summary and automated analysis of these statements revealed a five-way classification by type.

The first classification Rationale includes Mandate for Change (in philosophy); Recognition of Tradition involving Virginia's devotion to traditional values and its capacity for adaptation; National Needs pointing up Virginia's responsibility to contribute to the national demand for an educated citizenry; and Interstate Comparisons concerned with the comparison of Virginia in respect to her sister states in the realm of education.

A second classification of authoritative policy statements deals with quality and equity of education as well as conformity to state and national criteria.

A third classification of statements deals with timing, i.e., short and long term priorities and sequence and implementation processes.

A fourth set of statements deals with locational factors, such as the need for application of specific reforms in urban, rural, and geographical areas.

The fifth group of statements concerns strategy, subdivided into economic feasability, organization, tactics, and activation of public concern.

The second source of goals--internal non-authoritative recommendations--consists of educational recommendations by those officially designated by "authorities" to serve as reviewers, advisors, evaluators, and consultants in Virginia's educational programs.

The third source of goals involves perceptions of the importance of objectives in the learner-oriented and supportive-facilitative domains by administrators, supervisors, teachers, students, and lay groups.

A fourth source of goals--external non-authoritative recommendations--includes objectives widely recommended by professional associations or found in professional literature and also found in federal governmental policy and documented experiences of other state and local educational agencies.

Specific behavioral objectives in the learner-oriented (cognitive and affective) domain were based on and developed from three of the four sources of goals just described: internal authoritative policies, internal non-authoritative recommendations, and external non-authoritative recommendations as well as from evidences of programmatic effort such as officially accepted curriculum guides and accreditation standards. These objectives include English (literature, language, composition), Mathematics, Reading, Science, Social Studies as well as personal and social categories of affective behavior.

More general behavioral objectives were developed for Foreign Languages, Health and Physical Education including psychomotor skills, Vocational Education, Early Childhood Education, Work Study and Library Skills, Special Education, Art and Music.

Additional objectives in the supportive-facilitative domain are currently being developed and cover teacher personnel, administrative and supervisory personnel, instructional resources (particularly library and audio-visual), organization of school

## Research Strategy for Needs Assessment

### Table #1

**1. GOALS**

1) Internal authoritative policies for learner-oriented, learner-supportive, and learning-facilitative domains.

2) Internal non-authoritative recommendations for learner-oriented, learner-supportive, and learning-facilitative domains.

3) Internal non-authoritative perceptions of objectives in learner-oriented, learner-supportive, and learning-facilitative domains.

4) External non-authoritative recommendations in learner-oriented, learner-supportive, and learning-facilitative domains.

**2. EVIDENCES OF PROGRAMMATIC EFFORT**

1) Internal authoritative programmatic directives including state approved courses of study and other approved guidelines for learner-oriented, learner-supportive, and learning-facilitative domains.

2) Statistical data on programmatic incidence and funding for learner-oriented, learner-supportive, and learning-facilitative domains.

**3. EVIDENCES OF PROGRAMMATIC OUTCOMES**

1) Objective achievement test scores

2) Scores on affective rating scales.

3) Objective indices (statistical data) of school dropouts, delinquency, post-secondary education, participation in extra-curricular activities.

**4. NEEDS**

1) Absolute gaps between Goals and Evidences of Programmatic Outcomes (no evidence of programmatic effort).

2) Relative gaps between Goals and Evidences of Programmatic Outcomes (varying degree of programmatic effort)

based activity (e.g., class size, time schedules, course offerings), supporting school resources (e.g., guidance and research), school facilities, school division organization (e.g., shared services, consolidation), and State Department of Education.

Since this is a Virginia needs assessment study, the objectives are being checked against the goals on which they are based in order to verify their relationship to internal (Virginia) as well as to external sources. The items in the achievement tests and affective rating scales are being validated by content and/or construct analysis with the learner-oriented objectives.

## Evidences of Programmatic Effort

As we mentioned, the design moves from goals to programmatic outcomes. Goals which are "implemented" is our definition of "programmatic effort." They are found in specific and explicit directives of instructions, guides or standards or other means for assigning fiscal and personnel resources. Accreditation standards exemplify this stage of educational programming.

Evidences of programmatic effort enable one to associate statements of educational policies couched in broad, general terms to subsequent programmatic directives--a type of programmatic effort which includes more concrete and specific statements and thence an association with cognitive, affective, and supportive-facilitative objectives. Although programmatic effort is no guarantee of programmatic outcome, this scheme makes it possible to link the areas of school activity in the evaluation of outcomes with their appropriate antecedent policies, programmatic

directives, and objectives.

Evidences of Programmatic Outcomes

Included here are student attainments in terms of scores on selected standardized achievement tests and affective rating scales developed by the Staff and selected from published instruments. As a rationale for test-scale selection and development, it is assumed that the self system is modified and expressed in self perceptions, varbal learnings, and manifest behaviors. The school through its social system interacts with the individual learner by modifying his self-perceptions, sentiments and values, and manifest behaviors.

Other evidences of programmatic outcomes include objective indices of levels of attainment and performance such as school attendance, school dropout, delinquency, post-secondary education, number of students needing or not needing counseling, participation in extra-curricular activity, and the like.

Educational Needs

Needs then are generally and operationally defined as absolute or relative gaps between goals and evidences of programmatic outcomes. An absolute gap occurs when goals which while widely sought outside of Virginia are not programmatically implemented in the state. A relative gap occurs when goals are in varying degrees programmatically implemented in Virginia, but evidences of programmatic outcomes fall short of established goals. In addition to other planned analyses, the Staff hopes time will permit studying the data to determine the degree to which

unsatisfactory programmatic outcomes are the result of a limited programmatic effort or of limited achievement when programmatic effort is judged by the Staff as satisfactory in terms of scope, availability, and funding, or in some ratio the result of both conditions.

## Other Assessment Strategies

Related to the aforementioned two-stage research strategy are several plans for needs assessment.

### Affective Domain

The Bureau Staff proposed to carry out the assessment of affective needs at two levels which are roughly analogous to learner-oriented and supportive-facilitative objectives. The levels are (1) the extent of affective difficulties, and (2) the capabilities of each sampled school division to prevent and/or cope with these difficulties.

Figures 1 and 2 illustrate two of the sample models for affective assessment at the learner-oriented and supportive-facilitative levels.

Because the recent Harris Poll (May, 1969) suggested that educators and students no longer see eye-to-eye on educational priorities, it seems desirable, indeed necessary, to make provisions for the Staff to serve as a "third factor" in attitude assessment and look to both the teachers and students for fair data. (See Figure 1).

One source of collateral evidence concerning the educational goals presently held by Virginians was available to the staff from a doctoral dissertation study conducted during 1969 by

Figure 1. Sample Model for the Assessment of Affective Needs at the Learner - Oriented Level

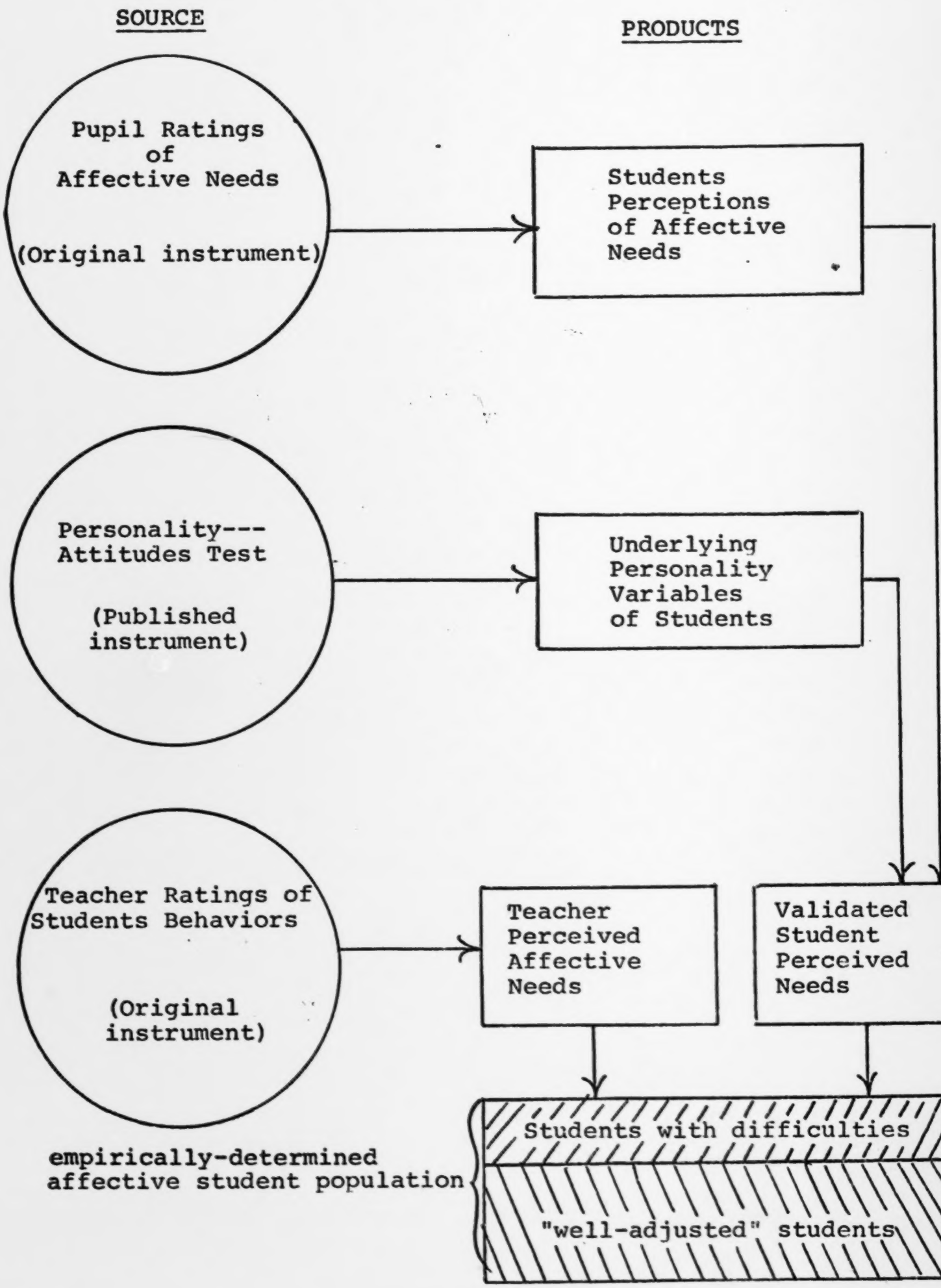
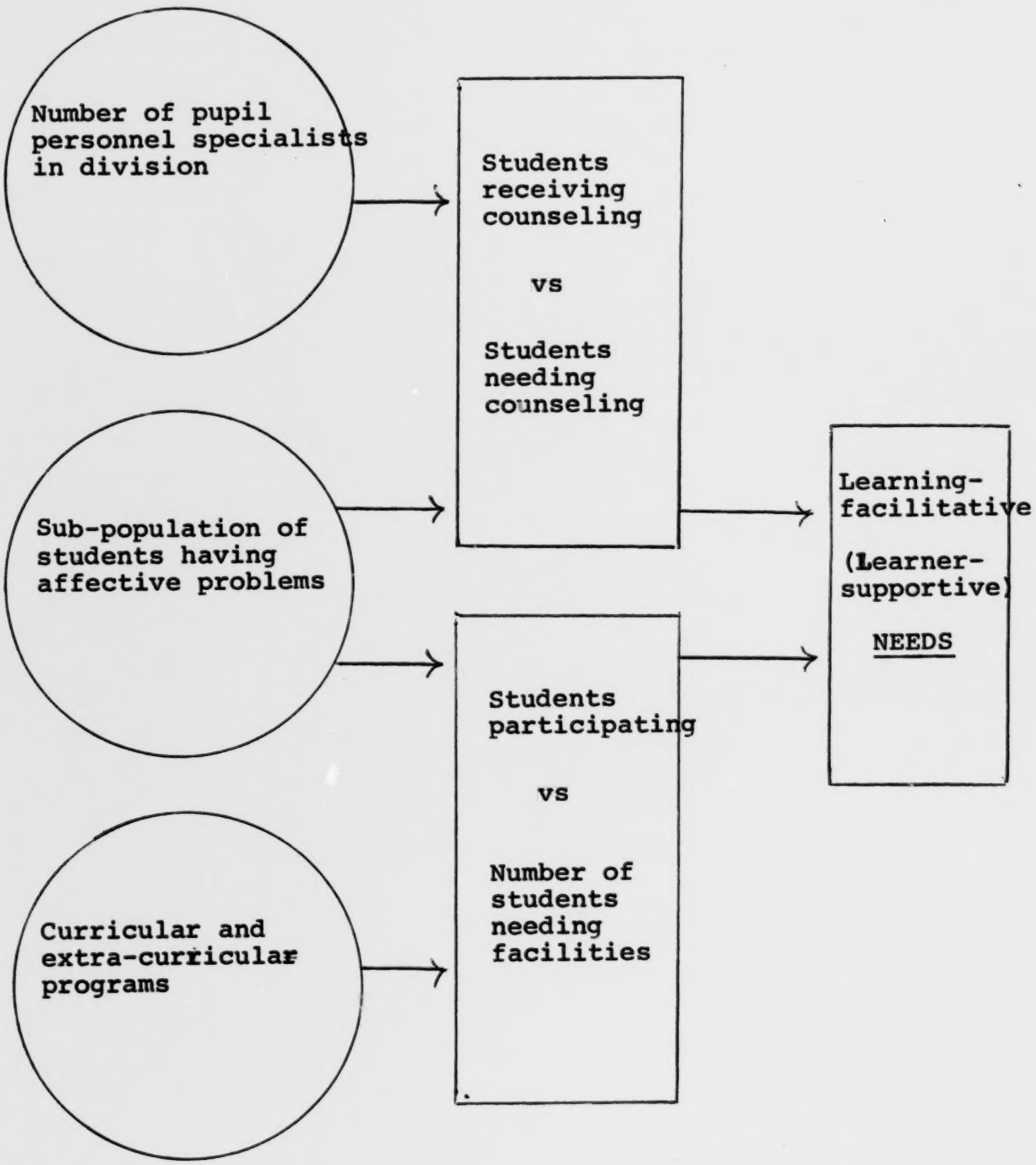


Figure 2. Model for Assessment of Affective Needs at the Facilitative - Supportive Level



Walter M. Gant of the School of Education at the University of Virginia. Using the Delphi technique, Dr. Gant polled 332 individuals identified as "status leaders," who have official connections with 25 formal organizations that are to some degree influential in the articulation of educational policy within the state.

The successive pollings of this sample produced a list of 84 goals for elementary schools which were ranked both according to the importance assigned to each and the degree of consensus among the respondents.

Goal Perceptions of Administrators

As cited earlier, one source of educational goals in the Virginia Needs Assessment Study is the perception of educators in the learner-oriented and supportive-facilitative domains. Evidence as to the educational perceptions of 850 elementary school principals has been made available to the project staff in the form of a report completed during 1969 and conducted by William H. Seawell and Joseph A. Spagnolo, Jr. of the University of Virginia School of Education for the Virginia Department of Elementary School Principals of the Virginia Educational Association.

Of particular import and input for and to the Needs Assessment Study are the principals' perceptions of and responses to the following:

1. organizational characteristics of elementary schools,
2. resources and resource personnel available to elementary school principals,

3. the school and community,
4. special programs in elementary schools,
5. time allocation of elementary school principals,
6. supervision and curriculum developments by elementary school principals.

Additional Goal Statements

Comparative inter-group assessments of goal perceptions are planned among educators, students, and lay groups. Plans also include a comparison of students' perceptions of goal importance in the cognitive and affective scales.

Although such data are subjective, the Staff considers comparative perceptions as information holding potential for a more extensive description of needs status than the case might be were hard data used exclusively.

## Conclusion

Excellence in education requires a rational basis for change. The first step in change is an assessment of needs. In this context the Virginia Needs Assessment Study measures a state against its own levels of aspiration and further measures a state against levels of aspiration external to it.

In its assessment, the Virginia Needs Assessment Study acknowledges and uses as a rationale the evidences of interrelationships between a self system and a social system.

The Virginia Needs Assessment Study will lay the groundwork for continuous evaluation with built-in procedures to adjust changing goals to changing outcomes over time.